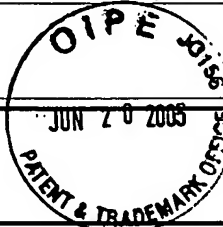


**TRANSMITTAL LETTER**  
**(General - Patent Pending)**

Docket No.  
18513

In Re Application Of: Hurst Zeiser



Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/521,992	January 19, 2005	Unassigned	23389	Unassigned	Unassigned

Title: **PISTON MACHINE WITH PULSATION-REDUCING DEVICE**
COMMISSIONER FOR PATENTS:

Transmitted herewith is:

**CORRESPONDENCE ENCLOSING TRANSLATION OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT.**

in the above identified application.

- ☒ No additional fee is required.  
☐ A check in the amount of \_\_\_\_\_ is attached.  
☒ The Director is hereby authorized to charge and credit Deposit Account No. 19-1013/SSMP as described below.
- ☐ Charge the amount of \_\_\_\_\_  
☒ Credit any overpayment.  
☒ Charge any additional fee required.
- ☐ Payment by credit card. Form PTO-2038 is attached.

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**
  
*Signature*

Dated: June 15, 2005

Leopold Presser  
Registration No. 19,827

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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on	
June 15, 2005	(Date)
Signature of Person Mailing Correspondence	
Leopold Presser	
Typed or Printed Name of Person Mailing Correspondence	

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicant:** Horst Zeiser

**Examiner:** Unassigned

**Serial No.:** 10/521,992

**Art Unit:** Unassigned

**Filed:** January 19, 2005

**Docket:** 18513

**For:** PISTON MACHINE WITH PULSATION..

**Dated:** June 15, 2005

**Confirmation No.:** Unassigned

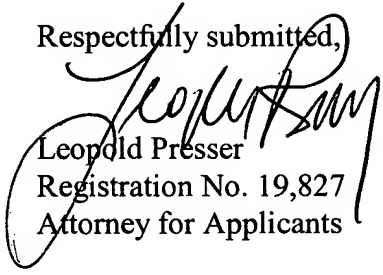
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**CORRESPONDENCE**

Sir:

Submitted herewith is a translation of the International Preliminary Examination Report, which was submitted on January 19, 2005.

Respectfully submitted,

  
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**CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)**

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Dated: June 15, 2005

  
\_\_\_\_\_  
Leopold Presser

Translation

PATENT COOPERATION TREATY

PCT/EP2003/007422



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P26628/WO Kf/dav	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/007422	International filing date (day/month/year) 09 July 2003 (09.07.2003)	Priority date (day/month/year) 19 July 2002 (19.07.2002)
International Patent Classification (IPC) or national classification and IPC F04B 1/20		
Applicant BRUENINGHAUS HYDROMATIK GMBH		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.  <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of <u>3</u> sheets.
3. This report contains indications relating to the following items:  I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 06 November 2003 (06.11.2003)	Date of completion of this report 18 June 2004 (18.06.2004)
Name and mailing address of the IPEA/EP  Facsimile No.	Authorized officer  Telephone No.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/007422

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☐ the international application as originally filed
- ☒ the description:  
 pages 1-9, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages 1-9, filed with the letter of 24 May 2004 (24.05.2004)
- ☐ the drawings:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/EP 03/07422

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1-9	YES
	Claims		NO
Inventive step (IS)	Claims	2, 3, 4, 5	YES
	Claims	1, 6-9	NO
Industrial applicability (IA)	Claims	1-9	YES
	Claims		NO

### 2. Citations and explanations

Reference is made to the following documents:

D1: DE 100 34 857 A (LIEBHERR MACHINES BULLE S A)  
31 January 2002 (2002-01-31)

D2: US-A-5 762 479 (MIGUEL EDSON CORREA ET AL)  
9 June 1998 (1998-06-09)

- Document D1, which is regarded as the closest prior art, discloses a piston engine with a rotatably mounted cylinder drum with a plurality of cylinder bores disposed about the periphery, in which are disposed displaceable pistons, the cylinder bores having at one end cylinder openings which, according to the angle of rotation of the cylinder drum, are temporarily connected to one of two kidney-shaped control elements which are each connected to a working line, a reversing region being formed in each of the spaces between the kidney-shaped control elements, a pressure compensation line opening at a first end into at least one of the reversing regions,

from which the subject matter of claim 1 differs in that:

- (a) the pressure compensation line opens at a second end into the working line on the outlet-side, the length (L) of the working line on the outlet-side between the outlet-side kidney-shaped control element and the second end of the pressure compensation line being such that between a pressure wave at the second end of the pressure compensation line caused by a stroke of the piston and continuing in the outlet-side working line and the angle of rotation of the cylinder drum, a defined phase relationship exists suitable for pressure compensation between the cylinder bore connected to the first end of the pressure compensation line and the outlet-side working line.

The present invention can thus be considered to address the problem of devising a piston engine with a reduction in pulsation, the engine being simple to produce and not requiring any additional components or additional installation space.

The above-mentioned features (a) have already been used, however, for the same purpose in a similar piston engine; see document D2, in particular the abstract; the description, column 3, line 29, to column 3, line 61; and figures 3 and 4. If a person skilled in the art wished to achieve the same aim in a piston engine as per document D1, he could easily apply these features to like effect to the subject matter of D1. In this way he would arrive at a piston engine as per claim 1 without thereby being inventive.

Consequently, the subject matter of claim 1 does not

involve an inventive step (PCT Article 33(3)).

Note: the "defined phase relationship" mentioned in claim 1 is an implicit feature of any piston engine by the laws of nature.

Furthermore, the following functional indications from claim 1 do not allow a person skilled in the art to determine what technical features are necessary for carrying out the stated function (PCT Article 6):

"suitable for pressure compensation between the cylinder bore connected to the first end of the pressure compensation line and the outlet-side working line".

2. Dependent claims 6 to 9 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the PCT requirements for inventive step.